

ABSTRACT OF THE DISCLOSURE

In a chemical mechanical polishing method for
5 polishing a low-k material insulating layer formed on a
semiconductor wafer, aqueous abrasive slurry composed of a
water component, an abrasive component, a first additive for
making the low-k material insulating layer of the
semiconductor wafer hydrophilic in nature, and a second
10 additive for adding acidity to the aqueous abrasive slurry,
is prepared. The aqueous abrasive slurry is feed to a
rotating polishing pad having a larger diameter than that of
the semiconductor wafer. The low-k material insulating layer
of the semiconductor wafer is applied and pressed onto the
15 rotating polishing pad while rotating the semiconductor wafer
in the same rotational direction as that of the rotating
polishing pad, whereby a polishing rate of the low-k material
insulating layer of the semiconductor wafer is improved.